

NEW NORTH AMERICAN TABANIDAE (DIPTERA).
PART IV. ZOPHINA NEW GENUS FOR "APATOLESTES"
EISENI TOWNSEND FROM LOWER CALIFORNIA¹

CORNELIUS B. PHILIP²

Townsend (1895) described "*Apatolestes* (or nov. gen.) *eiseni* n.sp." from San Jose de Cabo, Lower California, based on a "wholly blackish" male specimen with peculiar antennae, and stated "it is entirely different from *Chrysops* in its antennal structure, and can hardly be either a *Silvius* or an *Apatolestes*." He deferred setting up a new genus, however, on the male alone. This type was destroyed in the 1906 earthquake in San Francisco³, but J. M. Aldrich had examined it in October 1905, making a rough drawing of the antennae showing the scape longer than tall, and noting only in addition in correspondence with J. S. Hine that the ocelli were large and on a high prominence. Also in correspondence with Hine on July 6, 1907, Townsend forwarded on unpublished manuscript he had prepared on "*Zophotabanus* n. genus" in reference to this dark fly, based on two additional topotypic males and a female, the latter, unfortunately, not in good preservation. It seems doubtful if any of these additional specimens were lost with the type since Aldrich saw only the type at the California Academy of Sciences a few months previous to the great fire. None was indicated as being forwarded with the manuscript to Hine. Among Townsend material in the British Museum, there remains one badly pest-damaged male labelled, "San Jose del Cabo, L. Calif. Sept." and "*Melanophlebys* n.gen. *eiseni* Twns. types" apparently in Townsend's own handwriting. This specimen was loaned to the writer through courtesy of Mr. H. Oldroyd. It seems obvious that the other pair was destroyed by pests before this was sent to the British Museum. Heavy reliance must therefore be placed on published and unpublished notes to place this species for catalog purposes pending capture of more satisfactory specimens. There is no greater prospect that additional specimens will turn up in the near future than have in the previous intervening years, and present

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³ Van Dyke (Entomological News, 17(6):222. 1906) mentioned the types of Coleoptera, Hemiptera and Hymenoptera as having been saved. E. S. Ross advises that the Odonata types, then on loan, have been returned and are extant.

comments are offered to clarify the status of this long-questioned name. The Hine correspondence has been furnished through generosity of Mr. Edward S. Thomas of the Ohio State Museum.

In some respects, Townsend's notes describe specimens related to *Veprius presbiter* Rond. of Chile, but the three species of *Veprius* all have *Tabanus*-like antennal plates with dorsal angles, and the differentiation of eye facets in the males is not marked as in "*A.*" *eiseni*. Furthermore, there are minute, scattering, ocular hairs in the former, none in what remains of the "*A.*" *eiseni* specimen; the face is much more sunken between the swollen cheeks in the latter, while the palpi are as long as the proboscis. If the female has a denuded subcallus (described as a "transverse callosity") and a probable "longitudinal callosity" on the front, considering other described characters, this species does appear distinct on a generic level as discussed below. Since it is a pangoniine, a variant of Townsend's original manuscript name is adopted here, namely, *Zophina*, n. gen. (it is impossible to find an unawkward patronymic with five genera already named after Townsend). His additional unpublished notes follow:

"Head very short conical in profile, more or less flattened in appearance across the eyes; ♀ front about one-half as wide as either eye, narrowed toward vertex; ♂ eyes contiguous for a long distance, from near base of antennae to ocellar tubercle. Ocelli present. Proboscis short. Eyes bare. Difference in size of facets in ♂ eyes very marked, abrupt, not gradual, the small facets being limited to less than lower verticle one-third of eye. Front of ♀ with a transverse callosity next base of antennae, divided longitudinally by a median furrow and defined above (posteriorly) by a deep transverse furrow. There is probably also a longitudinal callosity between the transverse one and the ocelli, but it is not distinct in this specimen which is poorly preserved. Face short, antennae springing from a little below the anterior angle of eyes. Antennae not stout, rather small, more slender in the ♂ than in the ♀. First joint not elongate, but little if any longer than wide; second joint hardly one-half as long as first in ♀, in ♂ appearing but little shorter than first; third joint composed of five annuli, the basal one swollen and bead-like in ♂, less distinctly bead-like in ♀, as thick as first and second antennal joints; remaining annuli abruptly slender in ♂, slightly stouter in ♀ and tapering more gradually from basal annulus. Third antennal joint in ♀ but little longer than first and second taken together, in ♂ considerably longer. Hind tibiae with two spurs. Femora and tibiae not thickened, moderately slender in ♂, a little heavier in ♀, the front tibiae of ♀ slightly bowed. Wings normal, with none of the posterior cells narrowed or closed, longer than abdomen. Type, *Apatolestes eiseni* Towns.

"[*"Zophotabanus"*] *eiseni* Towns. Proc. Cal. Acad. Sci. Ser. 2, Vol. IV, p. 596, No. 9 (*Apatolestes* or nov. gen.).

"San Jose del Cabo. One ♀, and two ♂♂, Sept. These three additional specimens enable me [Townsend] to properly characterize the form as a new genus. It is very distinct from the previously known genera. The ♀ measures full 10 mm. in length; wing 9 mm. The ♂, 7 to 8 mm. The whole insect has a blackish appearance, even including the halteres and wings, though the color of the body and head is dark brownish. The front, face, and antennae are dilute brownish, more dilute in the ♂'s; the tip of anulate portion of antenna is black."

Townsend's failure to publish this manuscript is probably explained by his statement written to Hine that he intended henceforth to concentrate on the higher Diptera.

A dermestid larva (molted skin still present) has destroyed the entire abdomen, one side of the thorax with one wing missing, parts of one eye and one antenna of the British Museum specimen. A little damage along the dorsum of the plate and 3 annuli of the other antenna has occurred but all segments are present. The following additional but limited description can be made. The basal plate of the third segment, though "bead-like" in profile, is laterally compressed and not as thick as the pedicel and scape. The last is a little longer than thick, not produced above, with sparse black hairs; pedicel as tall but about two-thirds as long; plate subequal to the scape in length but more compressed laterally, and the four terminal annuli nearly twice as long as the plate and constricted abruptly not tapering from their juncture. The frontal triangle is restricted due to the extensive eye area, and is bare and shining brownish, not swollen or much raised above the eye level in profile in contrast to *Veprius*. The face to and including the oral margins unusually depressed somewhat as in *Apatolestes*, the cheeks in consequence appearing much swollen throughout their length. The palpi are slender, a little longer than the proboscis, very shaggy brown-haired almost concealing the apparently attenuated apices, unlike the truncated condition seen in most *Apatolestes*. The labellae are small and fleshy. Brief relaxing appeared to revive *Silvius*-like, irregular maculations on the undamaged part of the one eye. The subepaulet of the wing is bare and there is a short spur present at the fork of R_{4+5} . The legs are all intact, with no pale hairs and no accentuated hind tibial fringe. The outer fore tarsal claw is a little longer than the inner.

The specimen is too badly damaged to warrant its establishment as a lectotype. Since the original description was based on

the male, a future female could not be used for this purpose though it will undoubtedly be the better for more accurate, ultimate determination of relationships of this species.

In some respects *Z. eiseni* is intermediate between *Apatolestes* and *Silvius*. The writer was inclined to place the published species as a sub-genus under *Silvius*. Study of this specimen even though damaged enables corroboration of Townsend's earlier opinion that it is distinct on a generic level.

SUMMARY

Zophina new genus is proposed for *Apatolestes* (?) *eiseni* Townsend, genotype species from Lower California. Comment is made on Townsend's published and unpublished notes on this species.

REFERENCE

TOWNSEND, C. H. T.

1895. On the Diptera of Baja California, including some species from adjacent regions. Proceedings of the California Academy of Sciences, Ser. 2, 4:593-620.

MIROLEPISMA DESERTICOLA SILVESTRI, A MYRMECOPHILE FROM CALIFORNIA

(Thysanura: Lepismatidae)

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Mirolepisma deserticola was described by Silvestri in 1938 from a single specimen collected in Tucson, Arizona in 1908. Since that time, no mention has been made of its biology or of its occurrence in California. Mallis (1941), however, did mention that he had observed Thysanura running in and out of the nest of the harvester ant, *Pogonomyrmex barbatus* var. *nigrescens*, near Riverside, California. He evidently did not collect or attempt to identify the species of Thysanura.

In 1950 W. F. Barr, now of the University of Idaho, while collecting beetles in the vicinity of Winnemucca, Nevada, found two female *Mirolepisma* in the nest of harvester ants. This discovery led the writer to search the desert areas of California and Nevada

¹ All species of ants were identified by M. R. Smith of the United States National Museum.